



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,266	03/05/2007	Valerie Smits	F-889 (31223.0121)	1309
25264 7590 02/03/2010 FINA TECHNOLOGY INC PO BOX 674412 HOUSTON, TX 77267-4412				
EXAMINER				
ROGERS, MARTIN K				
ART UNIT		PAPER NUMBER		
1791				
MAIL DATE		DELIVERY MODE		
02/03/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/579,266

Applicant(s)

SMITS, VALERIE

Examiner

MARTIN ROGERS

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-19 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-19 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/GS-08)
Paper No(s)/Mail Date 10/7/2009
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isao (Japanese Kokai 2002-275330), Fischer et al. (USP 6583253), Demain (WO 00/50476).

In regards to claim 11, Isao discloses a method for the production of a hollow article comprising providing a polypropylene polymer having a melt flow index between 0.5 and 50 g/10 minutes produced by the polymerization of propylene in the presence of a metallocene catalyst having either C1 or C2 symmetry (Formula 2, [0009], and [0027]), subjecting the propylene polymer to an injection-stretch-blow molding operation to mold said polymer into a hollow article having walls formed of the polymer ([0001] and [0002]) to form a container product ([0002]). Isao does not explicitly disclose creating an isotactic polymer that also has a melt flow index within the required range.

However, in multiple representative examples presented by Isao, isotactic polymers are produced with melt flow indexes outside of the range required by applicant ([0096] [0106]), demonstrating that it is well known in the art to create polypropylene containers out of isotactic polymers. Therefore, because Isao discloses creating polymers which are in the required MFI range ([0006]), one of ordinary skill in the art would have found it obvious to create a polymer that is isotactic and also within the required melt flow index range.

It is the examiner's position that because the polymer is made by the process steps required by Applicant and has the same physical properties required by Applicant, the product will inherently have the relative properties required by Applicant when compared to a Zeigler Natta catalyst system. The examiner would like to point out that the term "Zeigler Natta catalyst" is extremely broad because there are more than one type of Zeigler Natta catalyst.

In any event, Fishcer discloses that it is well known the art to use metallocene catalysts (Column 1, line 32) in favor of Ziegler Natta catalysts (Column 1, line 36) to process propylene (Column 1, line 53) for the benefit of lowering its melting temperature (Column 1, lines 53-54). This lower melting temperature reduces the cycle times in processes which require heating of the polymer to a working temperature (Column 1, line 49). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the catalyzed process of Isao to replace processes which utilize Zeigler Natta catalyst (as disclosed by Fischer) for the benefit of reducing the cycle time of the thermoforming process.

Demain discloses that it is well known in the art to utilize metallocene catalysts in order to impart polypropylene with greater rigidity than would be achieved with a Ziegler Natta catalyst (Page 4, line 9). Therefore, it would have been obvious to utilize the catalyzed process disclosed by the above hypothetical combination for the well known purpose of creating a polypropylene with greater rigidity than would be achieved with a Ziegler Natta catalyst (as disclosed by Demain).

In regards to claim 12, Isao further discloses that the catalyst have the required molecular structure (Formula 2 and [0009]).

In regards to claims 13-15, Isao further discloses that the polypropylene include 0 to 5 weight percent ethylene ([0006] and [0012]).

In regards to claim 16, Isao further discloses that the transmission metal be selected from the fourth column of the periodic table ([0009]).

In regards to claims 17-19, Isao further discloses that the catalyst component be isopropylidene-(3-tert-butyl-5-methyl-cyclopentadienyl)(fluorenyl) zirconium dichloride (Formula 2 and [0009]).

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Isao as applied to claim 11 above, and further in view of Valyi (USP 4308086) and Dickson et al. (USP 4079104).

In regards to claim 22, Isao discloses molding the parison, reheating it, and then stretch blow molding ([0002]), but is silent as to the geometry of the injection mold used and how the parison is reheated.

Valyi discloses that it is well known in the art to injection mold parisons in a multicavity mold for the benefit of reducing the hazard of deflecting the mold support structure (Column 11, lines 29-30).

Dickson discloses that it is well known to heat parisons with reflected radiant heat (Figure 1: 60, 62, 64, 66). Note that because the heating and blow molding are performed using the same parison support (Column 4, lines 2-3), heater and blow mold are part of the same molding apparatus.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the blow molding process of Isao with the multicavity parison mold disclosed by Valyi and the heating method of Dickson for the benefit of Valyi and Dickson disclosing well known methods of accomplishing the steps required by Isao.

Response to Arguments

Applicant's arguments filed 10/7/2009 have been fully considered but they are not persuasive.

On page 5 of the remarks, Applicant argues that the required catalyst creates a polypropylene having a comparatively low melting temperature with maintained rigidity can be produced. The examiner would like to point out that Applicant appears to be arguing unclaimed subject matter with this statement. Applicant further argues that the lower melting temperature achieved without loss of mechanical properties leads to a reduction in cycle time while maintaining rigidity in the final articles. Applicant then states that where the prior art has not recognized a feature of the pending claims, no expectation would exist that utilization of such catalyst would successfully yield the desired improvement. The examiner does not find this persuasive because Isao does recognize all of the positively claimed method steps of the claim 1. Isao discloses using the catalyst required by Applicant to create a polymer with the physical properties required by Applicant (A MFI in a required range and an isotactic configuration). Therefore, it is the examiner's position that the beneficial properties being discussed by the Applicant will inherently be present. In any event, as shown in the rejection above, the prior art does expressly recognize the benefits being discussed by Applicant (Fischer discloses the benefit of reduced cycle time and Demain discloses the benefit of the improved rigidity). The examiner notes that Applicant's claimed comparison of the present catalyst system to a Zeigler Natta catalyst system is extremely broad. To begin

with, these are two completely different catalyst systems which would be used under different circumstances. Applicant never specifies exactly which Zeigler Natta catalyst be used. The properties of the Zeigler Natta catalyst will be the dependent on several different operating conditions (temperatures, concentrations, catalyst composition etc.).

Applicant appears to argue on page 6 that the rejection's discussion of optimization was improper. The examiner notes that optimization was never included in the above rejections. It is the examiner's position that the creation of an isotactic polymer with the required MFI through the use of the required catalyst are all within the scope of Isao. Although the examiner cited an example in which an isotactic polypropylene is created with a MFI above the claimed range, Isao clearly discloses that polypropylenes with an MFI within the range required by Applicant can also be created by the catalyst system. Because the isotacticity is a result of the catalyst used, one of ordinary skill would appreciate that polypropylenes created with the same catalyst but designed to have a MFI within the range required by Applicant would also be isotactic.

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARTIN ROGERS whose telephone number is 571-270-7002. The examiner can normally be reached on Monday through Thursday, 7:30 to 5:00, and every other Friday, 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MR

/Richard Crispino/
Supervisory Patent Examiner, Art Unit 1791